

What is claimed is:

1 1. A method of magnetic transfer for magnetic transferring a layout pattern of
2 data signal of a master disc for magnetic transfer into a magnetic disc as a
3 magnetized pattern of the data signal, by overlapping said master disc for magnetic
4 transfer on a surface of said magnetic disc, and by magnetizing a magnetic film on
5 said master disc for magnetic transfer, said master disc for magnetic transfer having
6 said magnetic film formed thereon in a shape of the layout pattern corresponding to
7 a predetermined data signal,

8 said method comprising the steps of:

9 cleaning said master disc for magnetic transfer by contacting with and
10 separating a surface whereon said magnetic film is formed, with and from a dummy
11 disc; and

12 magnetic transferring by overlapping said master disc for magnetic transfer
13 with said magnetic disc after said step of cleaning.

1 2. The method of magnetic transfer according to claim 1, further comprising
2 the step of inspection for detecting a defect in said magnetic disc after the magnetic
3 transfer into said magnetic disc,

4 wherein said step of magnetic transferring is performed again from said
5 master disc for magnetic transfer into said magnetic disc after performing said step
6 of cleaning said master disc for magnetic transfer by contacting the surface of said
7 master disc for magnetic transfer whereon said magnetic film is formed with a

8 dummy disc, when a defect is detected by said step of inspection.

1 3. The method of magnetic transfer according to claim 1, wherein said step of
2 cleaning said master disc for magnetic transfer is executed by contacting and
3 separating the surface of said master disc for magnetic transfer whereon said
4 magnetic film is formed with and from said dummy disc every after magnetic
5 transfer to a predetermined number of said magnetic discs.

1 4. The method of magnetic transfer according to claim 1, further comprising
2 the step of repeating an operation of contacting and separating said master disc for
3 magnetic transfer with and from said dummy disc for a predetermined number of
4 times, wherein

5 said step of magnetic transfer is executed by contacting said magnetic disc
6 and said master disc for magnetic transfer after said step of repeating an operation
7 of contacting and separating for a predetermined number of times.

1 5. The method of magnetic transfer according to claim 1, further comprising
2 the step of inspection for detecting a defect in a surface of a disc, wherein

3 an operation of contacting and separating said master disc for magnetic
4 transfer and said dummy disc is repeated for a predetermined number of times
5 before magnetic transferring from said master disc for magnetic transfer into said
6 magnetic disc, when a number of defects equal to or more than a predetermined
7 number are detected in one of said magnetic disc and said master disc for magnetic
8 transfer in said step of inspection.

1 6. The method of magnetic transfer according to claim 1, wherein an
2 operation of contacting and separating said master disc for magnetic transfer with
3 and from said dummy disc is repeated for a predetermined number of times every
4 after magnetic transferring to a predetermined number of said magnetic discs.

1 7. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein said operation of contacting and separating is made by suctioning gas
3 between said master disc for magnetic transfer and said dummy disc, and by
4 supplying gas between said master disc for magnetic transfer and said dummy disc.

1 8. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein hardness of said master disc for magnetic transfer is greater than hardness
3 of said magnetic disc and said dummy disc.

1 9. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein hardness of said dummy disc is lower than hardness of said magnetic disc.

1 10. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein an area for contacting said master disc for magnetic transfer and said
3 dummy disc includes an area wherein said magnetic transfer is performed from said
4 master disc for magnetic transfer into said magnetic disc.

1 11. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein said master disc for magnetic transfer is cleaned by repeating contact and
3 separation between said master disc for magnetic transfer and said dummy disc not

4 coated with lubricant.

1 12. The method of magnetic transfer according to one of claims 1 to 6,
2 wherein said dummy disc is formed with a plated film on a surface thereof.

1 13. The method of magnetic transfer according to claim 12, wherein said
2 plated layer has magnetic property of ferromagnetism.

1 14. A method of magnetic transfer for magnetic transferring a layout pattern
2 of data signal of a master disc for magnetic transfer into a magnetic disc as a
3 magnetized pattern of the data signal, by overlapping said master disc for magnetic
4 transfer on a surface of said magnetic disc, and by magnetizing a magnetic film on
5 said master disc for magnetic transfer, said master disc for magnetic transfer having
6 said magnetic film formed thereon in a shape of the layout pattern corresponding to
7 a predetermined data signal,

8 said method comprising the steps of:

9 repeating an operation of contacting and separating a dummy master disc
10 with and from said magnetic disc for a predetermined number of times; and

11 magnetically transferring by contacting said master disc for magnetic transfer
12 with said magnetic disc after said step of repeating.

1 15. The method of magnetic transfer according to one of claims 1 and 14,
2 wherein said operation of contacting and separating is executed by suctioning gas
3 between said both discs subject to the close contact and separation, and by

4 supplying gas thereafter.

1 16. The method of magnetic transfer according to claim 15, wherein hardness
2 of said dummy master disc is lower than hardness of said magnetic disc.

1 17. An apparatus for magnetic transfer for magnetically transferring a pattern
2 of a magnetic film of a master disc for magnetic transfer into a magnetic disc by
3 contacting said master disc for magnetic transfer with said magnetic disc, and by
4 applying an external magnetic field, said master disc for magnetic transfer having
5 said magnetic film formed on at least one surface thereof,

6 said apparatus comprising:

7 said master disc for magnetic transfer, written therein with a predetermined
8 data to be transferred;

9 a retainer disposed slidably in position on a guide member for retaining said
10 master disc for magnetic transfer;

11 a support base provided therein with a vent hole, for supporting one of said
12 magnetic disc and a dummy disc;

13 a feeding unit for supplying gas into said vent hole provided in said support
14 base;

15 an exhaust unit for evacuating the gas through said vent hole; and

16 a magnet for applying the magnetic field for magnetic transfer.

1 18. The apparatus for magnetic transfer according to claim 17, wherein said
2 retainer is provided with a through hole, and said master for magnetic transfer is
3 retained with said retainer by suctioning the gas via said through hole.

1 19. The apparatus for magnetic transfer according to claim 17, wherein said
2 master disc for magnetic transfer has a plurality of radially oriented grooves
3 arranged to extend from a center portion toward a perimeter and in a manner not to
4 reach to an outermost perimeter thereof.

1 20. The apparatus for magnetic transfer according to claim 17, wherein said
2 magnetic disc or said dummy disc is provided with an inner peripheral hole, and a
3 boss is provided at a center portion of said master for magnetic transfer for
4 engaging with said inner peripheral hole.

1 21. The apparatus for magnetic transfer according to claim 20, wherein said
2 boss is provided with at least one cut opening in a perimeter thereof.

1 22. The apparatus for magnetic transfer according to claim 17, wherein said
2 exhaust unit functions to contact said master disc for magnetic transfer with one of
3 said magnetic disc and said dummy disc, and said feeding unit functions to separate
4 said master disc for magnetic transfer from one of said magnetic disc and said
5 dummy disc.